IN THE CLAIMS

Please amend the claims for this application as set forth below:

--1. (Currently amended) An implant, which includes a body of non-resorbable bioactive material, with zones of resorbable bioactive material ~~located in~~ randomly dispersed throughout the body of non-resorbable material, and with the sizes of a major proportion of the zones of resorbable material being from 10 to 500 microns.--

--2. (Original) An implant according to Claim1, wherein the non-resorbable bioactive material is hydroxyapatite, while the resorbable material is tricalcium phosphate.--

--3. (Original) An implant according to Claim 2, wherein substantially all of the zones of tricalcium phosphate are of the same size.--

--4. (Cancelled)

--5. (Previously amended) An implant according to Claim 2, wherein the size of the zones is from 10 to 300 microns.

--6. (Previously amended) An implant according to Claim 2, wherein the proportion of hydroxyapatite to tricalcium phosphate in the implant is from 4:1 to 2:3, on a mass basis.--

--7. (Currently amended) An implant according to Claim 2, ~~wherein~~ which includes randomly interspersed macropores ~~are provided in the body~~.--

--8. (Original) An implant according to Claim 7, wherein the macropores are substantially spherical, with at least some of the macropores being interconnected by being coalesced together.--

--9. (Original) An implant according to Claim 8, wherein the macropores are from 100 to 2000 microns in size.

--10. (Previously amended) An implant according to Claim 8, wherein at least a majority of the macropores are of substantially the same size, and wherein the macropores occupy from 20% to 80% of the total volume of the body.--

--11. (Currently amended) An implant according to Claim 7, wherein ~~the macropores are randomly interspersed throughout the body, so that~~ the body has a network of interconnected coalesced rounded inner macroporous spaces.--

--12. (Previously amended) An implant according to Claim 8, wherein the body is provided with surface concavities.--

--13. (Previously amended) An implant according to 12, wherein the surface concavities are rounded, having diameters of from 100 to 2000 microns.--

--14. (Previously amended) An implant according to Claim 12, wherein the surface concavities are hemispherical and are interconnected with the macropores by being coalesced therewith.--

--15. (Currently amended) An implant according to Claim 2, ~~wherein~~ which includes micropores ~~are provided in the body,~~ with the micropores being randomly interspersed throughout the body of hydroxyapatite as well as throughout the zones of tricalcium phosphate.--

--16. (Original) An implant according to Claim 15, wherein the micropores are all of substantially the same size, and are smaller than 50 microns.

--17. (Previously amended) An implant according to Claim 15, wherein the micropores occupy 60% or less of the total volume of the body, excluding the volume occupied by the macropores.--

--18. (Original) A method of making an implant, which method includes

mixing a non-resorbable bioactive material in powder form with a thermoplastic binder at elevated temperature, to produce a first powder/binder mixture;

comminuting the first powder/binder mixture to obtain a first granular mixture having granules or particles with sizes from 10 to 500 microns;

mixing a resorbable bioactive material in powder form with a thermoplastic binder at elevated temperature, to produce a second powder/binder mixture;

comminuting the second powder/binder mixture to obtain a second granular mixture having granules or particles with sizes from 10 to 500 microns;

combining the first and second granular mixtures to form a combined mixture;

optionally, mixing the combined mixture with fugitive phase particles which are heat decomposable, with the fugitive phase particles having sizes of 100 to 2000 microns;

pressing or compacting the resultant mixture into a green compact or body;

when the fugitive phase particles are present, heating the green compacts or bodies to above the decomposition temperature of the fugitive phase particles; and

sintering the resultant green body, to obtain an implant.--

--19. (Original) A method according to Claim 18, wherein the non-resorbable bioactive material is hydroxyapatite, while the resorbable material is tricalcium phosphate.--

--20. (Original) A method according to Claim 19, wherein the temperature at which the mixing of the hydroxyapatite powder and the tricalcium phosphate powder with the thermoplastic binder to produce the first and second powder/binder mixtures takes place, is about 120°C, and wherein the comminution of the first and second powder/binder mixtures is effected by crushing the mixtures, and sieving them to the required granule or particle size.--

--21. (Previously amended) A method according to Claim 19, wherein the fugitive phase particles are present and are spherical stearic acid particles having a size range of 500 to 1000 microns.--

--22. (Original) A method according to Claim 21, wherein the mass proportion of the combined mixture to fugitive phase particles is about 1,27:1 by mass, to obtain an implant having a macropore volume of approximately 60% of the total implant volume.--

--23. (Previously amended) A method according to Claim 21, wherein the green compacts are heated to about 500°C, to allow melting and decomposition of the stearic acid, thereby forming, in the green compacts or bodies, interconnected macropores produced by the decomposition of the stearic acid particles.--

--24. (Original) A method according to Claim 23, wherein, to obtain a microporosity level or volume of 40% of the residual solid component of the implant, the sintering is effected at about 1100°C for one hour.--